NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

FACT SHEET

(pursuant to NAC 445A.236)

Applicant: Desert Hills Dairy
350 Campbell Lane
Yerington, Nevada 89447

Permit: NEV99000

Location: Desert Hills Dairy
Parcel #014-231-20
350 Campbell Lane
Yerington, Lyon County, Nevada 89447

Latitude: 39.09924° N; Longitude: 119.24917° W
Township 14 N, Range 24 E, Section 1 MDB&M

Public Water Supply: The facility is not located within a wellhead protection capture zone or a 7,000 foot public water supply well buffer zone.

General: The Applicant has applied for a water pollution control discharge permit, NEV99000, to discharge manure and process wastewater to groundwaters of the State in response to storms in excess of the 25-year, 24-hour storm event from the Desert Hills Dairy in Yerington. The facility is defined as a concentrated animal feeding operation (CAFO) because the dairy confines at least 700 mature dairy cows for 30 days or more in a 12-month period in an area devoid of vegetation during the normal growing season.

The existing 80-acre facility, formerly the Moreda Dairy, is owned and operated as a dairy by the Applicant. The facility was designed and constructed to confine a total herd size of approximately 3,000 head in open containment. The facility is operated with approximately 2,000 milkers. The facility includes four compacted soil wastewater ponds. The dairy process wastewater flows to one of three settling ponds, ponds one and two are 100-foot by 600-foot by 15-foot deep and pond three is 100-foot by 270-foot by 20-foot deep, with the clarified water flowing to the 270-foot by 420-foot by 25-foot deep fourth pond for storage/evaporation.

The Applicant is proposing to expand the facility to approximately double the herd size. The expansion is planned to include 63 acres of new corrals and 6.5 acres of ponds. The facility expansion must be designed to Natural Resource Conservation Service standards, including lined ponds.

Process wastewater generated at the facility includes liquid manure, cow wash water, barn wash water, water from washing the lines and milk storage tanks, precipitation, and runoff. All manure and process wastewater shall be evaporated or transferred to L-S Dairy, NEV99007, for composting and land application, therefore, a nutrient management plan is not required for this facility. The existing facility generates an estimated 7.3 million gallons of process wastewater per year; this volume should double with the increased herd size.

The discharge rate to L-S Dairy will be quantified at a flow meter on the pipeline from the evaporation/storage pond. All process wastewater will be transferred to L-S Dairy or evaporate. The transferred process wastewater reportedly has the following characteristics:

Kjeldahl nitrogen as N	513.5 mg/L	Chloride	7.5 mg/L
Total phosphorus	80.74 mg/L	pH	7.5 SU
Total dissolved solids	4,828 mg/L		

The proposed permit will require containment of all runoff of manure and process wastewater in response to storms that do not exceed the 25-year, 24-hour event. The storm discharge flow rate into the pond system will not be limited by the permit and will be dependent upon the magnitude of the storm event.

Flow: 0.040 million gallons per day (MGD) – 30-day average

This flow is the discharge of liquid manure, cow wash water, barn wash water, and water from washing the lines and milk storage tanks to the existing and proposed pond systems. This estimated flow is based on doubling the flow of the July 2004 permit application form to account for the proposed herd size increase. The facility is operated to minimize water consumption.

Receiving Water Characteristics: The Applicant will use a combination of evaporation and transfer to L-S Dairy to dispose of the manure and process wastewater generated by the facility. The Applicant has identified one well, Desert Hills Dairy Well #1, on the property and reports that groundwater is at 77 feet below ground surface. The well is located northeast of the existing dairy and may be downgradient. There are two production wells and two monitoring wells at the adjacent L-S Dairy.

Based on a January 2006 Nevada State Dairy Commission sampling, the facility water supply was characterized as follows:

Arsenic	26 µg/L	Manganese	0.02 mg/L
Barium	0.02 mg/L	Nitrate + Nitrite	0.7 mg/L
Boron	0.4 mg/L	pH	8.14 SU
Chloride	26 mg/L	Sulfate	78 mg/L
Copper	<0.02 mg/L	Total Dissolved Solids	322 mg/L
Fluoride	1 mg/L	Total Phosphorus	0.03 mg/L
Iron	<0.05 mg/L	Total Coliform	Absent

The Applicant will be allowed to discharge to groundwater only during storms greater than the 25-year, 24-hour storm event or after a series of chronic events that exceed the total volume of the 25-year, 24-hour storm event. No discharge to surface waters is permitted.

Proposed Effluent Limitations: During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee is authorized to discharge manure and process wastewater in response to storm events that exceed the 25-year, 24-hour storm event to groundwaters of the State.

Samples taken in compliance with the monitoring requirements specified below shall be taken from:

a. Manure and process wastewater; and

b. Storm-related discharge to groundwaters of the State.

The discharge shall be limited and monitored by the Permittee as specified in Table I.1.

TABLE I.1: Discharge Monitoring

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
		Sample Locations	Measurement Frequency	Sample Type
pH (standard units)	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Chlorides (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Total Dissolved Solids (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Total Suspended Solids (mg/L)	Monitor and Report	a.	Annually[4]	Discrete
		b.	Each discharge[2]	
5-day Biological Oxygen Demand (mg/L)	Monitor and Report	a.	Annually[4]	Discrete
		b.	Each discharge[2]	
Total Nitrogen -N (mg/L, mg/Kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Total Kjeldahl Nitrogen –N (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Nitrate –N (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete

PARAMETERS	EFFLUENT DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS		
		Sample Locations	Measurement Frequency	Sample Type
		b.	Each discharge[2]	
Ammonia -N (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Total Phosphorus -P (mg/L, mg/kg)[3]	Monitor and Report	a.	Biannually[1]	Discrete
		b.	Each discharge[2]	
Fecal Coliform (CFU or MPN/100 mL)	Monitor and Report	a.	Annually[4]	Discrete
		b.	Each discharge[2]	
Manure and/or Process Wastewater Transferred (tons, gallons)	Monitor and Report	a.	Monthly	Estimate
				Flow Meter
Volume of Discharge (gallons)	Monitor and Report	b.	Each discharge[2]	Estimate

Notes:
[1]: Biannual characterizations shall be conducted in the second and fourth quarters and reported in the appropriate Discharge Monitoring Report (DMR).
[2]: The Permittee shall collect the sample within 30 minutes of the first knowledge of the discharge. If sampling in that period is inappropriate due to dangerous weather conditions, collect the sample as soon as possible after suitable conditions occur, and document the reason for delay. Also, report date and time of each discharge.
[3]: mg/L for liquids, mg/kg for solids.
[4]: Annual characterizations shall be conducted in the fourth quarter and reported in the fourth quarter DMR.

mg/L:	Milligram per liter.	CFU:	Colony Forming Unit.
gpd:	Gallons per day.	MPN:	Most Probable Number.
-N:	As nitrogen.	mL:	Milliliter.
-P:	As phosphorus.	mg/kg:	Milligrams per kilogram.

Discrete groundwater samples shall be collected to confirm the effective protection of groundwater under the established discharge conditions of this permit. [Required if Permittee has not demonstrated that all waste storage facilities are in compliance with the NRCS Code 313 and/or Code 359 design and construction standards. See schedule of Compliance Item I.A.26.b.]

a. All wells shall be monitored in accordance with the following parameters:

TABLE I.2.

PARAMETER	REQUIREMENTS	SAMPLE LOCATION[1]	FREQUENCY	SAMPLE TYPE
Depth to Groundwater (feet)	Monitor & Report	MW-1, MW-2	Quarterly	Field Measurement
Groundwater Elevation (feet)	Monitor & Report	MW-1, MW-2	Quarterly	Calculate
pH (standard units)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete
Chlorides (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete
Nitrate -N (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete
Total Nitrogen –N (mg/L)	10	MW-1, MW-2	Quarterly	Discrete
Total Dissolved Solids (mg/L)	Monitor & Report	MW-1, MW-2	Quarterly	Discrete

Notes:
[1]: Additional monitoring wells may be added to the permit as a minor modification.
mg/L: Milligrams per liter
-N: As nitrogen

b. The detection of concentrations of total nitrogen as nitrogen (-N) in groundwater samples invoke the following limitations and response requirements:

i. If the total nitrogen-N concentration increases to 7.0 mg/L, an alternate method of manure storage, approved by the Division, shall be selected;

ii. If the total nitrogen-N concentration increases to 9.0 mg/L, construction of the approved alternate manure storage facility shall begin; and

iii. If the total nitrogen-N concentration increases to 10.0 mg/L, discharge to groundwater shall cease.

Rationale for Permit Requirements: Monitoring requirements for the parameters specified in Table I.1: Discharge Monitoring are being proposed to ensure that the Applicant has appropriate manure and process wastewater data to comply with the Manure Transfer Requirements, Part I.A.9., and to determine any potential impact to waters of the State that may occur in response to a storm related discharge.

The groundwater monitoring of Part I.A.2. will be required if the Applicant cannot demonstrate the existing pond system was not constructed to appropriate NRCS liner requirements. If all manure and process wastewater storage facilities have been constructed to the appropriate NRCS standards, groundwater monitoring shall not be required.

Schedule of Compliance: The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications that the Administrator may make in approving the schedule of compliance.

a. The Permittee shall achieve compliance with the effluent limitations upon issuance of the permit.

b. Within sixty (60) days of the permit effective date, the Permittee shall:

i. Submit to the Division a certification stamped by a Nevada licensed Professional Engineer stating that all waste storage facilities at the permitted site were constructed in accordance with NRCS Conservation Practice Standard Code 313, Waste Storage Facility, October 2003 or more recent; or NRCS Conservation Practice Standard Code 359, Waste Treatment Lagoon, October 2003 or more recent, as appropriate.

ii. Install groundwater monitoring wells and submit to the Division a groundwater monitoring plan, including a map of the well locations, to demonstrate that the waste storage facility(ies) are/have not degrading/ed groundwaters of the State; or

iii. Submit to the Division a schedule to complete the upgrade and/or replacement of all waste storage facilities to the standards of NRCS Conservation Practice Standard Code 313, Waste Storage Facility, October 2003 or more recent, or NRCS Conservation Practice Standard Code 359, Waste Treatment Lagoon, October 2003 or more recent, as appropriate, within one year.

All three of these options require submittal of Nevada licensed Professional Engineer stamped plans and volume calculations documenting compliance with the process wastewater containment requirements of this permit.

c. Within sixty (60) days of the permit effective date, the Permittee shall submit to the Division for review and approval an Animal Mortality Management Plan.

d. Within thirty (30) days of Division approval of the Animal Mortality Management Plan, the

Permittee shall implement the AMMP.

e. Thirty (30) days prior to the start of construction of a waste storage facility, the Permittee shall submit to the Division for review and approval Nevada licensed Professional Engineer stamped plans and specifications of the proposed storage facility. The design shall be in accordance with NRCS Conservation Practice Standard Code 313, Waste Storage Facility, October 2003 or more recent; or NRCS Conservation Practice Standard Code 359, Waste Treatment Lagoon, October 2003 or more recent, as appropriate.

f. Within thirty (30) days of the completion of construction, the Permittee shall submit to the Division a certification stamped by a Nevada licensed Professional Engineer stating that all waste storage facilities at the permitted site were constructed in accordance with NRCS Conservation Practice Standard Code 313, Waste Storage Facility, October 2003 or more recent; or NRCS Conservation Practice Standard Code 359, Waste Treatment Lagoon, October 2003 or more recent, as appropriate. If there were any deviations from the approved design, and stamped as-built drawings of the facility shall accompany the certification.

g. Within ninety (90) days of the permit effective date, the Permittee shall submit to the Division for review and approval an Operation and Maintenance Manual for the manure and process wastewater collection, retention, and transfer system.

h. At least ninety (90) days prior to the closure of a lagoon, pond, surface impoundment, or other manure or process wastewater storage or treatment facility, the Permittee shall submit to the Division for review and approval a component closure plan or facility closure plan, if operations will cease.

i. At least ninety (90) days prior to the temporary closure of a lagoon, pond, surface impoundment, or other manure, litter, or process wastewater storage or treatment facility, the Permittee shall submit to the Division for review and approval a component temporary closure plan or facility temporary closure plan, if operations will temporarily cease.

Proposed Determination: The Division has made the tentative determination to issue the proposed permit for a period of five (5) years.

Procedures for Public Comment: The Notice of the Division's intent to issue a permit authorizing the facility to discharge manure and process wastewater to the groundwater of the State is being sent to the **Mason Valley News** and the **Reno Gazette-Journal** for publication. The notice is being mailed to interested persons on the Division's mailing list. Anyone wishing to comment on the proposed permit can do so in writing for a period of thirty (30) days following the date of publication of the Notice of Proposed Action in the newspapers. The deadline for receipt of all comments pertaining to this proposed permit is 5:00 PM June 3, 2006. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State or interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and indicate the interest of the person filing the request and the reasons why a hearing is warranted. Public hearings granted by the Division shall be conducted in accordance with NAC 445A.238.

All comments or objections received within the thirty (30) day period will be considered in the formulation of final determinations regarding the application. If the determinations of the Administrator are substantially changed from the tentative determinations, the Administrator will give public notice of the revised determinations.

Additional comments and objections will be considered at that time.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

Prepared by: Bruce Holmgren
April 2006